

Fig. 5 is a schematic diagram at the time of heating with circular electric furnace by using the inventive appliance.

Fig. 6 is a schematic diagram of the inventive pretreatment device.

Fig. 7 is a schematic diagram of the inventive pretreatment device.

Fig. 8 is a schematic diagram of the inventive pretreatment device.

Fig. 9 is a schematic diagram of the mechanism for injecting the absorbing liquid into the inventive appliance.

Fig. 10 is a schematic diagram of the inventive pretreatment device.

Fig. 11 is a schematic diagram of the inventive pretreatment device.

Fig. 12 is a schematic diagram of the inventive pretreatment device.

Fig. 13 is a schematic diagram of the inventive pretreatment device.

Fig. 14 is a schematic diagram of the inventive analytical device.

Fig. 15 is a schematic diagram of the inventive analytical device.

Rewrite paragraph bridging pages 8 and 9 as:

As a result of diligent investigations to solve the problems aforementioned, the inventors have developed a closed heat-decomposing appliance being an appliance for horizontally or slantly injecting heating section into an electric furnace to heat, decomposing the inner organics in the presence of oxygen gas, taking out from the electric furnace and cooling, then introducing the absorbing liquid to absorb the analyzed components, comprising a heating section made of quartz, hard glass or ceramic with one side closed and other side having ground joint, screw joint or O-ring-mounted joint and a closed introducing section that allows to connect to this heating section and ground glass joint screw joint or O-ring-mounted joint via O-ring-mounted portion and has cock or valve as a mechanism for closing and introducing the absorbing liquid to absorb the testing components from outside after heat-decomposition, or has packing or septum to introduce the absorbing liquid with

C2
needle pipe as well. Further, they have found following knowledges by implementing a method for heat-decomposing a sample which may sometimes contain organics using this appliance and for absorbing the testing components in sample, leading to the completion fo the invention.

Page 14, please delete the first full paragraph and replace it with the following paragraph:

C3
The connecting form of closed introducing section to the heating section of the inventive appliance is not particularly restricted, provided that, even if the inner pressure inside the appliance may somewhat fluctuate during treatment of sample, the connection can be achieved leaklessly, and, for example, ground joint, screw, O-ring etc. mentioned. Here, the shape of O-ring is not particularly restricted and, in short, it is only necessary to have a circular hole at central portion and to be able to connect the closed introducing section to the heating section.

Rewrite the paragraph bridging page 19 and 20 as:

C4
Fig. 1 is a schematic diagram of cross section of the inventive appliance in the axial direction. In Fig. 1, number 1 is an example using quartz tube with one side closed and other side having interchangeable ground joint 2. In place of this quartz tube 1, those made of said materials such as hard glass tube and alumina ceramic tube can also be used. To this interchangeable ground joint 2, absorbing liquid-introducing section made of hard glass etc. and provided with two-way cock 3 and absorbing liquid reservoir 4 is connected. On actual pretreatment, after oxygen and sample were set up in the quartz tube 1, two-way cock 3 is closed, heat-decomposition is performed followed by cooling, then absorbing liquid is accommodated in the absorbing liquid reservoir 4, and two-way cock 3 is opened to introduce the absorbing liquid into tube for use.

Page 20, delete the first full paragraph and replace it with the following paragraph:

C5
Fig. 2 is a schematic diagram of cross section of the inventive appliance in the axial direction. In Fig. 2, numeral 1 is an example using quartz tube with one side closed and other side having interchangeable ground joint 2. To this interchangeable ground joint 2, absorbing liquid-introducing section as described above, made of hard glass etc. and provided with absorbing liquid reservoir 4 and solenoid valve 5 is connected. On actual pretreatment, operation may be made similarly to the case of appliance shown in Fig. 1.

Rewrite the paragraph bridging pages 23 and 24 as:

CC
The injecting means to be used in the inventive device is not particularly restricted, if it can hold the inventive appliance cooled by said cooling means and inject the absorbing liquid without leak of gas of the testing components produced by decomposition of sample set up in the inventive appliance. For example, when using the inventive appliance that opens and shuts the closed introducing section closed with cock or valve on introduction of the absorbing liquid, a mechanism for injecting under pressure from tube connected to cock or valve using various pumps etc., a mechanism for sucking the absorbing liquid from tube connected to cock or valve, making the inside negative pressure by cooling the inventive appliance, and the like can be used. Moreover, when using the inventive appliance that is closed with packing or septum and introduces the absorbing liquid with needle pipe, a mechanism for injecting under pressure from tube connected to needle pipe using various pumps etc. and the like can be used. Thereamong, preferably, in the case of appliance comprising the closed introducing section with packing or septum to introduce the absorbing liquid with needle pipe as a mechanism for introducing the absorbing liquid for absorbing the testing components from outside, an absorbing liquid-injecting mechanism comprising needle pipe, motor buret, valve with actuator,

CC
moving mechanism of needle pipe and washing place, wherein the needle pipe is pierced through the packing or septum of the inventive appliance by moving mechanism, the absorbing liquid is introduced by switching the valve with actuator and working the motor buret, and then needle pipe is moved to the washing place moving mechanism to wash the contaminated needle pipe, is preferable for use.

Rewrite the paragraph bridging pages 27 and 28 as:

Cⁿ
Fig. 9 is a schematic diagram of the mechanism for injecting the absorbing liquid into the inventive appliance. In Fig. 9, numeral 15 is the inventive appliance with packing or septum, numeral 22 is needle pipe, numeral 23 is motor buret, numeral 24 is valve with actuator, numeral 25 is moving mechanism of needle pipe and numeral 26 is washing place. The needle pipe 22 is pierced through packing or septum of the inventive appliance 15 by moving mechanism 25, and, after injected the absorbing liquid in absorbing liquid reservoir 27 by switching valve 24 with actuator and working motor buret 23, the needle pipe 22 is moved to washing place 26 by moving mechanism 25 to wash the contaminated needle pipe with washing liquid in the washing liquid reservoir 28.

Page 28, line 10 to page 29, line 2, delete in its entirety and insert:

Further, in the mechanism for injecting the absorbing liquid to the inventive appliance, it is also possible to inject as follows.

The inventive appliance is connected to cock (solenoid valve) and the cock is connected to motor buret accommodated with absorbing liquid via tube. The absorbing liquid is injected to the inventive appliance by opening cock and working motor buret.

The inventive appliance is connected to cock and the cock is connected to plunger pump accommodated with absorbing liquid via tube. The absorbing liquid is injected to the inventive appliance by opening cock and working plunger pump.

The inventive appliance is connected to valve and the valve is connected to motor buret accommodated with absorbing liquid via tube. The absorbing liquid is injected to the inventive appliance by switching valve to connect the motor buret to the inventive appliance and working motor buret.

The inventive appliance is connected to valve and the valve is connected to absorbing liquid reservoir accommodated with absorbing liquid via tube. The absorbing liquid is injected to the inventive appliance by cooling the inventive appliance to make the inside of appliance negative pressure and switching valve to connect the absorbing liquid reservoir to the inventive appliance.

Page 32, delete 1st complete paragraph and replace it with the following paragraph:

Besides, the results etc. obtained in following examples 1 through 20 are collectively shown, respectively; type of sample, quantity of sample, theoretical consumption amount of oxygen, amount of oxygen at heating section of the inventive appliance and ratio of amount of oxygen at heating section to theoretical consumption amount of oxygen in Table 1; material of heating section, length on injection of sample into furnace, heating temperature, heating time, material of sample boat, type of absorbing liquid used and angle on slating sample in Table 2; contents of halogen and sulfur derived theoretically from sample (theoretical value), contents of halogen and sulfur obtained as a result (observed value) and recovery rate being a ratio therebetween (observed value/theoretical value) in Table 3.

Rewrite the paragraph bridging pages 36 and 37 as:

C10
About 5 mg of S-benzylthiuronium chloride (from Kishida Kagaku Co.) were weighed out accurately into a platinum boat with length of 5 mm, width of 15 mm and height of 4 mm using microbalance M-3 from Metler Co., and inserted deep in a closed heat-decomposing appliance (length of tube: 30 cm, inner diameter of tube: 16 mm, outer diameter of tube: 18 mm) shown in Fig. 1. After injected oxygen, the appliance was stoppered at the absorbing liquid-introducing section. This closed heat-decomposing appliance was inserted horizontally as far as about 20 cm [beforehand] from the side of sample into a circular electric furnace (from Isuzu Seisakusho Co., attached with temperature controller EC5600 from Okura Electric Co.) heated to 1000 °C and heated beforehand for 5 minutes. Then, the closed heat-decomposing appliance was drawn out from the furnace, cooled, and injected with 2.5 ml of absorbing liquid comprising an aqueous solution of 0.04 mol/L sodium hydroxide and 24 % by weight of hydrogen peroxide from two-way cock, followed by shaking, which was allowed to stand for 30 minutes. Thereafter, the inside of the closed heat-decomposing appliance including ground portion was washed with pure water and diluted to 50 ml to submit to IC measurement.

Page 37, delete first full paragraph and replace it with the following paragraph:

C11
As for IC, CCPM (specified for resin) from Tosho Corp. was used for pump, CM-8010 (electroconductivity detector) from Tosoh Corp. for detector, CO-8011 from Tosoh Corp. for column oven, SC-8020 from Tosoh Corp. for integrator, TSK gel IC-Anion-PwPEEK (4.6 mm I.D. x 50 mm) from Tosoh Corp. for analytical column, and 1,3 mM potassium gluconate-1.3 mM borax-30 mM boric acid-5 % acetonitrile-0.5 % glycerol for mobile layer, and measurement was made under flow rate of 1.2 ml/min, column temperature of 40 °C and sample injection volume of 100

C11
μL. The calibration curve was prepared by appropriately diluting anion standard solution from Wako Pure Chemical Industries Ltd. to measure the absorbed liquid after decomposition of sample.

Page 38, delete the first complete paragraph and replace it with the following paragraph:

C12
Except that a fire-resistant ABS kneaded 100 parts of ABS (trade name JSR ABS10) from Japan Synthetic Rubber Co. with 26 parts of brominated epoxy resin flame retardant (trade name YDB-408) from Toto Kasei Co. and 8.7 parts of flame retardant Sb 203 (trade name Flame Cut 610R) from Tosoh Corp. was used for the sample, sample was pretreated similarly to Example 1 to implement the IC measurement. As a result, to the content (% by weight) of 9.73 % for Br in this substance determined from the quantity charged, the average and relative standard deviation on seen measurements (two appliances were used repeatedly five times and two times for each appliance) were 9.62% (RSD = 1.53 %).

Rewrite the paragraph by bridging pages 43 and 44 as:

C13
Except that the same closed heat-decomposing appliance as that in Example 4, excluding use of hard glass as a material, and sample boat were used, and the temperature of furnace and heating time were made to be 600 °C and 30 minutes, respectively, sample was treated similarly to Example 4 to implement the IC measurement similarly to Example 1. As a result, the theoretical contents (% by weight) of 17.49 % for Cl and 15.82 % for S in S-benzylthiuronium chloride, 17.90 % and 15.43 % were obtained for Cl and S, respectively.
